

REMARKS

In the present Amendment, claims 27-31 are added.

Claim 27 is independent and corresponds to a combination of the subject matter of independent claim 6 and dependent claim 12, which depends from claim 6.

Claims 28-30 depend from independent claim 6 and increase the lower limit of the recited Ag/binder ratio. Support is found, for example, on page 27 of the originally filed application, lines 12-25 and present independent claim 6. In more detail, claim 6 recites a Ag/binder volume ratio of 1/4 or higher. At page 27 of the specification, Applicants teach that the lower limit of the Ag/binder ratio is more preferably 1/3, further preferably 1/2 and most preferably 1/1. Thus, the specification supports a Ag/binder ratio of 1/3 or higher, 1/2 or higher, and 1/1 or higher.

Claim 31 depends from independent claim 6 and recites that the light-transmitting electromagnetic wave-shielding film has an aperture ratio of 85 % or higher. Support is found, for example, in the originally filed specification at page 39, lines 6-14.

No new matter is added, and entry of the Amendment is respectfully requested. After entry of the Amendment, claims 2-19 and 21-31 will be pending.

Referring to paragraph no. 6 at page 2 of the Office Action, claims 2-7, 9, 12, 21-23, 25 and 26 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2001/0015279 ("Marutsuka") in view of the English, machine translation of JP 2000-149773 ("Takaoka").

Further, referring to paragraph no. 7 of the Office Action, claims 6, 9, 10, 12, 21, 23 and 25 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of U.S. Patent Application Publication No. 2001/0045362 ("Deng") and Takaoka.

In addition, claims 8 and 24 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of Deng and further in view of U.S. Patent No. 3,989,522 (“Poot”); claim 9 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of Deng and further in view of U.S. Patent No. 4,362,796 (“Monroe”); claim 10 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of Deng and further in view of Deng; claim 11 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of Deng and further in view of U.S. Patent No. 4,631,214 (“Hasegawa”); claim 13 rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of Deng and further in view of U.S. Patent No. 7,060,241 (“Glatkowski”); claim 13 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Marutsuka in view of Deng and Takaoka and further in view of Glatkowski.

Applicants traverse and respectfully request the Examiner to reconsider in view of the amendments to the claims and the following remarks.

Claim 6 is independent.

Marutsuka teaches producing an electromagnetic radiation shield. The method of producing the electromagnetic radiation shield entails forming a coating, optionally subjecting the coating to reduction treatment, forming an electroless plating layer on the coating, forming a photoresist on the plating layer, image-wise exposing the resist, developing the resist, etching the plating layer and removing the resist.

The Examiner acknowledges that Marutsuka is deficient in that it fails to teach exposing and developing a silver salt-containing layer to form a metal silver portion and a light transmitting portion. In other words, the Examiner admits that Marutsuka teaches an entirely

different method of producing a light-transmitting electromagnetic wave-shielding film ("wave-shielding film").

The Examiner looks to Takaoka to make up for the deficiencies of Marutsuka.

Takaoka is cited by the Examiner as teaching a method of forming a patterned conductive layer using a silver salt-containing layer that is exposed and then developed via a development technique used for silver salt photographic films so as to form a metal silver portion, wherein the metal silver portion is then subjected to physical development to form a conductive portion.

However, the physical development technique taught by Takaoka is a silver salt diffusion transfer process utilizing physical development nuclei (the DTR method), wherein silver salt is deposited on physical development nuclei. In Takaoka, the silver metal is formed in unexposed portions.

In contrast, the present application is directed to forming the silver metal in exposed portions in order to increase the transparency of the wave-shielding film. (*See* the paragraph bridging pages 35-36 of the present specification). Applicants compare the process of the present application to the DTR method of Takaoka (JP 2000-149773) in Example 2. (*See* pages 53-54 of the present specification).

Further, one of ordinary skill in the art would have had no reason to combine the teachings of Marutsuka and Takaoka. Takaoka discloses a display electrode for a plasma display, which is completely unrelated to the wave-shielding film of Marutsuka, and Takaoka provides no teaching or suggestion that the silver salt development method disclosed therein would be applicable to producing a wave-shielding film. Similarly, one of ordinary skill in the art would have had no reason to replace the method of Marutsuka with the method of Deng.

The Examiner also cites Takaoka as disclosing that the reaction of the silver salt is carried out in a gelatin binder, all of which is contained in the sensitization layer. Further, the Examiner states that Takaoka discloses that the sensitization layer can contain 10-90 % by weight of silver halide, which the Examiner believes corresponds to a Ag/binder volume ratio of 1/2 based on 90 % by weight AgBr and 10 % by weight gelatin.

However, according to Applicants' calculations, the Ag/binder volume ratio is 1/4.49, which is lower than the recited Ag/binder volume ratio of 1/4 or higher.

As well, the Examiner acknowledges that Deng fails to teach a Ag/binder volume ratio of 1/4 or higher. In other words, all of the cited references fail to expressly disclose or provide any reason for producing a wave-shielding film wherein the silver-salt containing layer has a Ag/binder ratio of 1/4 or higher.

Even though Takaoka does mention that the sensitization layer can contain 10-90 % by weight of silver halide, this is a generic, broad range and Takaoka fails to indicate any technical features or advantages of the range (particularly for Ag/binder volume ratios greater than 1/4).

In view of the above, Applicants respectfully request reconsideration and withdrawal of the Section 103 rejections of the present claims.

In addition, Applicants submit that the recitation of dependent claim 12 and independent claim 27, that the "light transmitting portion does not substantially have physical development nuclei," excludes the wave-shielding film produced by the combination of Marutsuka with the prior art. (See page 40 of the present specification).

Applicants define "substantially" in the cited section as containing from 0 to 5 % of physical development nuclei. The results set forth in working Example 2 show that the process

according to Takaoka is excluded from this recitation, since the DTR method suffers from poor light transmittance due to the presence of physical development nuclei.

The presently recited method for producing a wave-shielding film is not simply the combination of familiar elements according to known methods which does no more than yield predictable results. On the contrary, the method of producing a wave-shielding film according to the present claims unexpectedly provides a wave-shielding film that is superior to the wave-shielding films obtained by the combination of Marutsuka with the cited art. The superior features include the combination of a high EMI-shielding property and a high light transmittance that was not attainable according to the method of Marutsuka.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

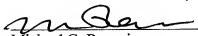
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